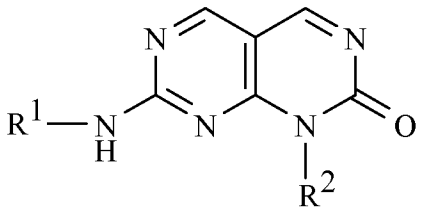
Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-2 (canceled).

3. (currently amended) A compound of ~~Claim 2 having the~~ formula I

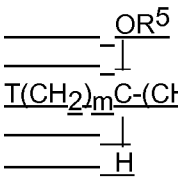


I

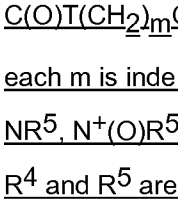
or a pharmaceutically acceptable salt thereof,

wherein:

R^1 and R^2 are independently selected from the group consisting of H, $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_1-C_{10} alkyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_nAr$, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro, heteroaryloxy, $T(CH_2)_mQR^4$,



$T(CH_2)_mC(CH_2)_mQR^4$,



$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1$-C_6alkyl$)_{1 \text{ or } 2}$, $(CH_2)_nAr$,

C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$, $(CH_2)_mNR^4R^5$, T-$(CH_2)_mQR_4$, CO-T-$(CH_2)_mQR^4$, NH(CO)T$(CH_2)_mQR^4$, T-$(CH_2)_mCO_2R^4$, or T$(CH_2)_mCONR^4R^5$;

R^6 is alkyl; and

Y is a halo counter-ion.

4. (currently amended) [[A]] The compound or pharmaceutically acceptable salt thereof of Claim 3 wherein R^1 is phenyl or substituted phenyl, pyridyl or substituted pyridyl.

5. (currently amended) [[A]] The compound or pharmaceutically acceptable salt thereof of Claim 4 wherein R^2 is an alkyl, substituted alkyl, or cycloalkyl unsubstituted or substituted.

6. (original) A compound selected from:

1-Methyl-7-[4-(pyrazol-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Methyl-7-[4-(4-methylpiperazin-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Methyl-7-[4-(4-hydroxypiperidin-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Methyl-7-{4-[4-(dimethylamino)piperidin-1-yl]phenylamino}pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Isopropyl-7-[4-(pyrazol-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Isopropyl-7-[4-(4-methylpiperazin-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Isopropyl-7-[4-(4-hydroxypiperidin-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Isopropyl-7-{4-[4-(dimethylamino)piperidin-1-yl]phenylamino}pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Bicyclo[2.2.1]hept-2-yl-7-[4-(pyrazol-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);

1-Bicyclo[2.2.1]hept-2-yl-7-[4-(4-methylpiperazin-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);

1-Bicyclo[2.2.1]hept-2-yl-7-[4-(4-hydroxypiperidin-1-yl)phenylamino]pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);

1-Bicyclo[2.2.1]hept-2-yl-7-{4-[4-(dimethylamino)piperidin-1-yl]phenylamino}pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);

7-[4-(4-Aminoacetyl-piperazin-1-yl)-phenylamino]-1-cyclopentyl-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-{4-[4-(2-Amino-4-methyl-pentanoyl)-piperazin-1-yl]-phenylamino}-1-cyclopentyl-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Methyl-7-{4-[4-(3-morpholin-4-ylpropyl)piperidin-1-yl]phenylamino}pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Isopropyl-7-{4-[4-(3-morpholin-4-ylpropyl)piperidin-1-yl]phenylamino}pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-{4-[4-(3-morpholin-4-ylpropyl)piperidin-1-yl]phenylamino}pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Bicyclo[2.2.1]hept-2-yl-7-{4-[4-(3-morpholin-4-ylpropyl)piperidin-1-yl]phenylamino}pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);
1-Cyclopentyl-7-(4-methanesulfonyl-phenylamino)-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-(4-fluoro-3-methyl-phenylamino)-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(3-Amino-pyrrolidin-1-yl)-phenylamino]-1-cyclopentyl-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-(4-piperazin-1-yl-phenylamino)-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-[4-(5-methyl-hexahydro-pyrrolo[3,4-c]pyrrol-2-yl)-phenylamino]-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(4-Acetyl-piperazin-1-yl)-phenylamino]-1-cycloheptyl-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one; and
1-Cyclopentyl-7-(pyridin-4-ylamino)pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one.

Claims 7-8 (canceled).

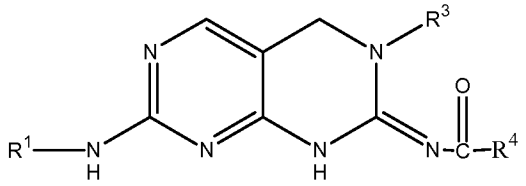
9. (original) A compound selected from:
1-Methyl-7-[4-(pyrazol-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Methyl-7-[4-(4-methylpiperazin-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Methyl-7-[4-(4-hydroxypiperidin-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Methyl-7-{4-[4-(dimethylamino)piperidin-1-yl]phenylamino}-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Isopropyl-7-[4-(pyrazol-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Isopropyl-7-[4-(4-methylpiperazin-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Isopropyl-7-[4-(4-hydroxypiperidin-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

1-Isopropyl-7-{4-[4-(dimethylamino)piperidin-1-yl]phenylamino}-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Bicyclo[2.2.1]hept-2-yl-7-[4-(pyrazol-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);
1-Bicyclo[2.2.1]hept-2-yl-7-[4-(4-methylpiperazin-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);
1-Bicyclo[2.2.1]hept-2-yl-7-[4-(4-hydroxypiperidin-1-yl)phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);
1-Bicyclo[2.2.1]hept-2-yl-7-{4-[4-(dimethylamino)piperidin-1-yl]phenylamino}-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);
7-[4-(4-Aminoacetyl-piperazin-1-yl)-phenylamino]-1-cyclopentyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-{4-[4-(2-Amino-4-methyl-pentanoyl)-piperazin-1-yl]-phenylamino}-1-cyclopentyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Methyl-7-{4-[4-(3-morpholin-4-ylpropyl)piperidin-1-yl]phenylamino}-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Isopropyl-7-{4-[4-(3-morpholin-4-ylpropyl)piperidin-1-yl]phenylamino}-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-{4-[4-(3-morpholin-4-ylpropyl)piperidin-1-yl]phenylamino}-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Bicyclo[2.2.1]hept-2-yl-7-{4-[4-(3-morpholin-4-ylpropyl)piperidin-1-yl]phenylamino}-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one (exo);
1-Cyclopentyl-7-(pyridin-4-ylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-(4-methanesulfonyl-phenylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-(4-fluoro-3-methyl-phenylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(3-Amino-pyrrolidin-1-yl)-phenylamino]-1-cyclopentyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(4-Acetyl-piperazin-1-yl)-phenylamino]-1-cyclopentyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-(4-piperazin-1-yl-phenylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
1-Cyclopentyl-7-[4-(5-methyl-hexahydro-pyrrolo[3,4-c]pyrrol-2-yl)-phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(4-Aminoacetyl-piperazin-1-yl)-phenylamino]-3-(3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(4-Aminoacetyl-piperazin-1-yl)-phenylamino]-3-(2-chloro-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

7-[4-(4-Aminoacetyl-piperazin-1-yl)-phenylamino]-3-(2,6-dichloro-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(4-Aminoacetyl-piperazin-1-yl)-phenylamino]-3-(2-methyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(4-Aminoacetyl-piperazin-1-yl)-phenylamino]-3-(2,6-dimethyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(2-Diethylamino-ethoxy)-phenylamino]-3-(3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(2-Diethylamino-ethoxy)-phenylamino]-3-(2-chloro-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(2-Diethylamino-ethoxy)-phenylamino]-3-(2,6-dichloro-3,5-dimethoxy-phenyl)-l-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(2-Diethylamino-ethoxy)-phenylamino]-3-(2-methyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(2-Diethylamino-ethoxy)-phenylamino]-3-(2,6-dimethyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(4-Diethylamino-butylamino)-3-(3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(4-Diethylamino-butylamino)-3-(2-chloro-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(4-Diethylamino-butylamino)-3-(2,6-dichloro-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(4-Diethylamino-butylamino)-3-(2-methyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(4-Diethylamino-butylamino)-3-(2,6-dimethyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(Pyridin-4-ylamino)-3-(3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(Pyridin-4-ylamino)-3-(2-chloro-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(Pyridin-4-ylamino)-3-(2,6-dichloro-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(Pyridin-4-ylamino)-3-(2,6-dimethyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-(Pyridin-4-ylamino)-3-(2-methyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

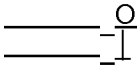
7-(Pyridin-4-ylamino)-3-(2,6-dichloro-3,5-dimethoxy-phenyl)-1-cyclopentyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
3-(2-Chloro-3,5-dimethoxy-phenyl)-7-(4-diethylamino-butylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
3-(2-Chloro-3,5-dimethoxy-phenyl)-7-[4-(2-diethylamino-ethoxy)-phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
3-(2-Chloro-3,5-dimethoxy-phenyl)-7-(pyridin-4-ylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
3-(3,5-Dimethoxy-phenyl)-7-(pyridin-4-ylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(2-Diethylamino-ethoxy)-phenylamino]-3-(3,5-dimethoxy-phenyl)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
3-(2,6-Dichloro-3,5-dimethoxy-phenyl)-7-(pyridin-4-ylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one; and
3-(2,6-Dichloro-3,5-dimethoxy-phenyl)-7-[4-(2-diethylamino-ethoxy)-phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one.

10. (currently amended) A compound of ~~Claim 2 having the~~ formula II



II

or a pharmaceutically acceptable salt thereof,
wherein:
R^1 is selected from the group consisting of H, $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_1-C_{10} alkyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_nAr$, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro, heteroaryloxy, $T(CH_2)_mQR^4$,



$T(CH_2)_mC(H)(CH_2)_mQR^4$, $C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

R^3 has the meanings of R^1, wherein R^1 is as defined above, as well as OH, NR^4R^5, $COOR^4$, OR^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, $T(CH_2)_mQR^4$, $T(CH_2)_mC(OR^5)(H)(CH_2)_mQR^4$,

wherein T and Q are as defined above;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1$-C_6alkyl$)_{1 \text{ or } 2}$, $(CH_2)_nAr$, C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$, $(CH_2)_mNR^4R^5$, T-$(CH_2)_mQR_4$, CO-T-$(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, T-$(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$;

R^6 is alkyl; and

Y is a halo counter-ion.

11. (original) A compound selected from:

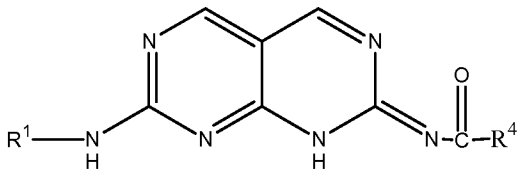
1-[7-[4-(2-Diethylamino-ethoxy)-phenylamino]-3-(3,5-dimethoxy-phenyl)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl]-3-ethyl-urea;

1-{3-(2-Chloro-3,5-dimethoxy-phenyl)-7-[4-(2-diethylamino-ethoxy)-phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl}-3-ethyl-urea;

1-*tert*-Butyl-3-[7-[4-(2-diethylamino-ethoxy)-phenylamino]-3-(3,5-dimethoxy-phenyl)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl]-urea;

1-*tert*-Butyl-3-{3-(2-chloro-3,5-dimethoxy-phenyl)-7-[4-(2-diethylamino-ethoxy)-phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl}-urea;
1-*tert*-Butyl-3-[3-(3,5-dimethoxy-phenyl)-7-(pyridin-4-ylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl]-urea;
1-[3-(3,5-Dimethoxy-phenyl)-7-(pyridin-4-ylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl]-3-ethyl-urea;
1-*tert*-Butyl-3-[3-(2-chloro-3,5-dimethoxy-phenyl)-7-(pyridin-4-ylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl]-urea;
1-[3-(2-Chloro-3,5-dimethoxy-phenyl)-7-(pyridin-4-ylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl]-3-ethyl-urea;
1-[3-(2-Chloro-3,5-dimethoxy-phenyl)-7-(4-diethylamino-butylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl]-3-ethyl-urea;
3-Methyl-N-{7-[4-(5-methyl-hexahydro-pyrrolo[3,4-c]pyrrol-2-yl)-phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl}-butyramide;
1-{7-[4-(4-Acetyl-piperazin-1-yl)-phenylamino]-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl}-3-isopropyl-urea; and
1-*tert*-Butyl-3-[3-(2-chloro-3,5-dimethoxy-phenyl)-7-(4-diethylamino-butylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2-yl]-urea.

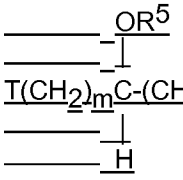
12. (currently amended) A compound of ~~Claim 2 having the~~ formula III



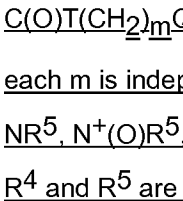
III

or a pharmaceutically acceptable salt thereof,
wherein:
R^1 is selected from the group consisting of H, $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_1-C_{10} alkyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_nAr$, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol,

thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro, heteroaryloxy, $T(CH_2)_mQR^4$,



$T(CH_2)_mC\text{-}(CH_2)_mQR^4$,



$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1\text{-}C_6alkyl)_{1 \text{ or } 2}$, $(CH_2)_nAr$, C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$, $(CH_2)_mNR^4R^5$, $T\text{-}(CH_2)_mQR_4$, $CO\text{-}T\text{-}(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, $T\text{-}(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$;

R^6 is alkyl; and

Y is a halo counter-ion.

13. (original) A compound selected from:

1-[7-(4-Fluoro-phenylamino)-pyrimido[4,5-*d*]pyrimidin-2-yl]-3-methyl-urea;

1-Isopropyl-3-(7-phenylamino-pyrimido[4,5-*d*]pyrimidin-2-yl)-urea;

1-{7-[4-(3-Aminomethyl-pyrrolidin-1-yl)-phenylamino]-pyrimido[4,5-*d*]pyrimidin-2-yl}-3-isopropyl-urea;

1-Isopropyl-3-[7-(4-piperazin-1-yl-phenylamino)-pyrimido[4,5-*d*]pyrimidin-2-yl]-urea;

1-{7-[4-(4-Acetyl-piperazin-1-yl)-phenylamino]-pyrimido[4,5-*d*]pyrimidin-2-yl}-3-isopropyl-urea;

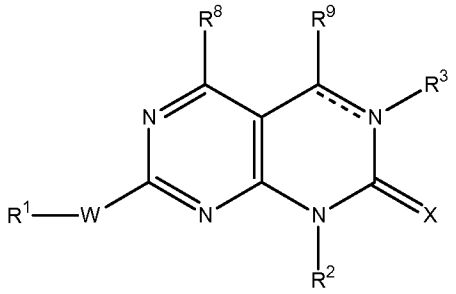
N-{7-[4-(3-Amino-pyrrolidin-1-yl)-phenylamino]-pyrimido[4,5-*d*]pyrimidin-2-yl}-3-methyl-butyramide;

N-[7-(4-Piperazin-1-yl-phenylamino)-pyrimido[4,5-*d*]pyrimidin-2-yl]-isobutyramide;

N-{7-[4-(4-Acetyl-piperazin-1-yl)-phenylamino]-pyrimido[4,5-*d*]pyrimidin-2-yl}-3-methyl-butyramide;

3-Methyl-N-[7-(pyridin-4-ylamino)-pyrimido[4,5-*d*]pyrimidin-2-yl]-butyramide;
1-Isopropyl-3-[7-(pyridin-4-ylamino)-pyrimido[4,5-*d*]pyrimidin-2-yl]-urea; and
N-{7-[4-(3-Aminomethyl-pyrrolidin-1-yl)-phenylamino]-pyrimido[4,5-*d*]pyrimidin-2-yl}-3-methyl-butyramide.

14. (currently amended) A compound of Formula IV ~~Claim 1 wherein W is S, SO, or SO_2~~



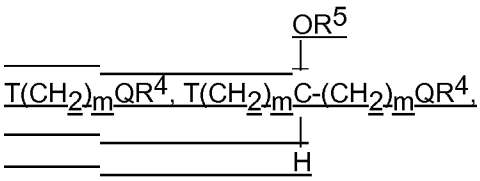
IV

or a pharmaceutically acceptable salt thereof,
wherein:
the dotted line represents an optional double bond;
W is S, SO, or SO_2;
X is either O, S, or NR^{10};
R^1, R^2, and R^{10} are independently selected from the group consisting of H, $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_1-C_{10} alkyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_nAr$, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro,

OR^5
|
heteroaryloxy, $T(CH_2)_mQR^4$, $T(CH_2)_mC$-$(CH_2)_mQR^4$,
|
H
$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

when the dotted line is present, R^3 is absent;

otherwise R^3 has the meanings of R^2, wherein R^2 is as defined above, as well as OH, NR^4R^5, $COOR^4$, OR^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4,



$T(CH_2)_mQR^4$, $T(CH_2)_mC\text{-}(CH_2)_mQR^4$,

wherein T and Q are as defined above;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1\text{-}C_6alkyl)_{1 \text{ or } 2}$, $(CH_2)_nAr$, C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$, $(CH_2)_mNR^4R^5$, $T\text{-}(CH_2)_mQR_4$, $CO\text{-}T\text{-}(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, $T\text{-}(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$.

R^6 is alkyl;

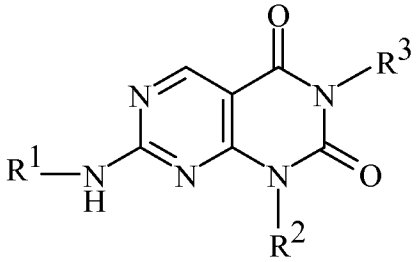
R^8 and R^9 independently are H, C_1-C_3 alkyl, NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, hydroxy, alkoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, CHO, CN, or NO_2;

when the dotted line is absent, R^9 is additionally oxo,

S	NH	NR^4	NOH	NOR^4
C- R^4,	CH,	CH,	CH,	C, and

Y is a halo counter-ion.

15. (currently amended) A compound of ~~Claim 1 having the~~ formula V

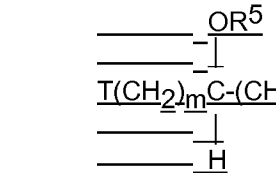


V

or a pharmaceutically acceptable salt thereof,

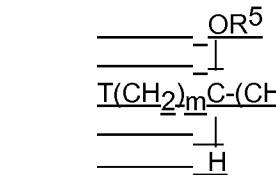
wherein:

R^1 and R^2 are independently selected from the group consisting of $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_nAr$, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro, heteroaryloxy, $T(CH_2)_mQR^4$,



$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

R^3 has the meanings of R^2, wherein R^2 is as defined above, as well as OH, NR^4R^5, $COOR^4$, OR^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, $T(CH_2)_mQR^4$,



wherein T and Q are as defined above;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1$-C_6alkyl$)_{1 \text{ or } 2}$, $(CH_2)_nAr$,

C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$, $(CH_2)_mNR^4R^5$, $T\text{-}(CH_2)_mQR_4$, $CO\text{-}T\text{-}(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, $T\text{-}(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$;

R^6 is alkyl; and

Y is a halo counter-ion.

16. (original) A compound selected from:

1-Isopropyl-7-[4-(4-methylpiperazin-1-yl)phenylamino]-1*H*-pyrimido[4,5-*d*]pyrimidine-2,4-dione;

7-[4-(2-Diethylaminoethoxy)phenylamino]-1-isopropyl-1*H*-pyrimido[4,5-*d*]pyrimidine-2,4-dione;

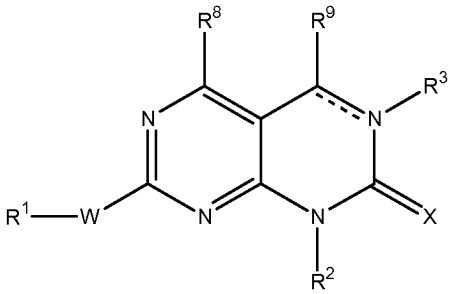
7-(4-Diethylamino-butylamino)-3-(3,5-dimethoxy-phenyl)-1-ethyl-l*H*-pyrimido[4,5-*d*]pyrimidine-2,4-dione;

7-[4-(2-Diethylamino-ethoxy)-phenylamino]-3-(3,5-dimethoxy-phenyl)-1-ethyl-1*H*-pyrimido[4,5-*d*]pyrimidine-2,4-dione; and

7-(Pyridin-4-ylamino)-3-(3,5-dimethoxy-phenyl)-l-ethyl-1*H*-pyrimido[4,5-*d*]pyrimidine-2,4-dione.

Claims 17-25 (canceled).

26. (currently amended) A method of inhibiting a cyclin-dependent kinase comprising contacting the cyclin-dependent kinase with a compound of Formula VI



VI

or a pharmaceutically acceptable salt thereof, ~~and the pharmaceutically acceptable salts thereof~~, wherein:

the dotted line represents an optional double bond;

W is NH, S, SO, or SO_2;

X is either O, S, or NR^{10};

R^1, R^2, and R^{10} are independently selected from the group consisting of H, $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_1-C_{10} alkyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_nAr$, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro,

heteroaryloxy, $T(CH_2)_mQR^4$, $T(CH_2)_mC(OR^5)H-(CH_2)_mQR^4$,

$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

when the dotted line is present, R^3 is absent;

otherwise R^3 has the meanings of R^2, wherein R^2 is as defined above, as well as OH, NR^4R^5, $COOR^4$, OR^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4,

$T(CH_2)_mQR^4$, $T(CH_2)_mC(OR^5)H-(CH_2)_mQR^4$,

wherein T and Q are as defined above;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1$-C_6alkyl$)_{1 \text{ or } 2}$, $(CH_2)_nAr$, C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$,

$(CH_2)_mNR^4R^5$, $T\text{-}(CH_2)_mQR_4$, $CO\text{-}T\text{-}(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, $T\text{-}(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$;

R^6 is alkyl;

R^8 and R^9 independently are H, C_1-C_3 alkyl, NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, hydroxy, alkoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, CHO, CN, or NO_2;

when the dotted line is absent, R^9 is additionally oxo,

S	NH	NR^4	NOH	NOR^4
C- R^4,	CH,	CH,	CH,	C, and

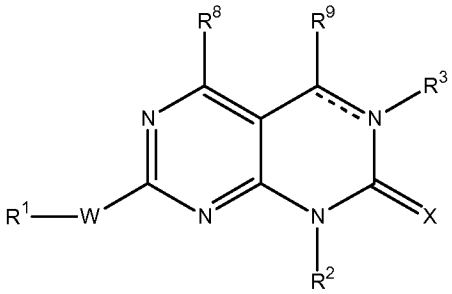
Y is a halo counter-ion.

27. (currently amended) [[A]] The method of Claim 26 wherein said cyclin-dependent kinase is cdc2.

28. (currently amended) [[A]] The method of Claim 26 wherein said cyclin-dependent kinase is cdk2.

29. (currently amended) [[A]] The method of Claim 26 wherein said cyclin-dependent kinase is cdk4 or cdk6.

30. (currently amended) A method of inhibiting a growth factor-mediated tyrosine kinase comprising contacting said growth factor-mediated kinase with a compound of Formula VI



VI

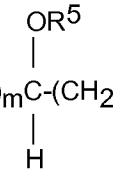
or a pharmaceutically acceptable salt thereof, ~~and the pharmaceutically acceptable salts thereof~~, wherein:

the dotted line represents an optional double bond;

W is NH, S, SO, or SO_2;

X is either O, S, or NR^{10};

R^1, R^2, and R^{10} are independently selected from the group consisting of H, $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_1-C_{10} alkyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_nAr$, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro,

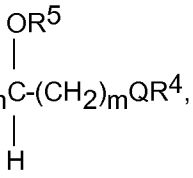


heteroaryloxy, $T(CH_2)_mQR^4$, $T(CH_2)_mC(OR^5)H(CH_2)_mQR^4$,

$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

when the dotted line is present, R^3 is absent;

otherwise R^3 has the meanings of R^2, wherein R^2 is as defined above, as well as OH, NR^4R^5, $COOR^4$, OR^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4,



$T(CH_2)_mQR^4$, $T(CH_2)_mC(OR^5)H(CH_2)_mQR^4$,

wherein T and Q are as defined above;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1$-C_6alkyl$)_{1 \text{ or } 2}$, $(CH_2)_nAr$, C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$,

$(CH_2)_mNR^4R^5$, $T\text{-}(CH_2)_mQR_4$, $CO\text{-}T\text{-}(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, $T\text{-}(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$;

R^6 is alkyl;

R^8 and R^9 independently are H, C_1-C_3 alkyl, NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, hydroxy, alkoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, CHO, CN, or NO_2;

when the dotted line is absent, R^9 is additionally oxo,

S	NH	NR^4	NOH	NOR^4
‖	‖	‖	‖	‖
C- R^4,	CH,	CH,	CH,	C, and

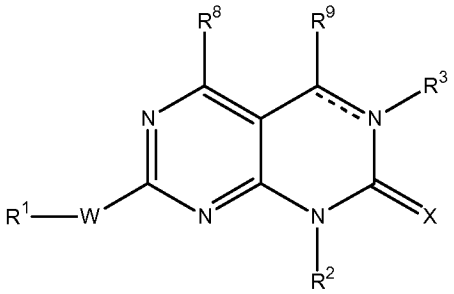
Y is a halo counter-ion.

31. (currently amended) [[A]] The method of Claim 30 wherein said growth factor-mediated tyrosine kinase is platelet derived growth factor (PDGF).

32. (currently amended) [[A]] The method of Claim 30 wherein said growth factor-mediated tyrosine kinase is fibroblast growth factor (FGF).

33. (currently amended) [[A]] The method of Claim 30 wherein said growth factor-mediated tyrosine kinase is vascular endothelial growth factor (VEGF).

34. (currently amended) A method of inhibiting a non-receptor tyrosine kinase comprising contacting said non-receptor tyrosine kinase with a compound of Formula VI



VI

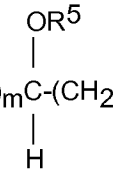
or a pharmaceutically acceptable salt thereof, ~~and the pharmaceutically acceptable salts thereof~~, wherein:

the dotted line represents an optional double bond;

W is NH, S, SO, or SO_2;

X is either O, S, or NR^{10};

R^1, R^2, and R^{10} are independently selected from the group consisting of H, $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_1-C_{10} alkyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_nAr$, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro,

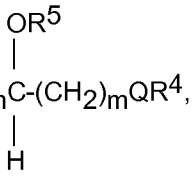


heteroaryloxy, $T(CH_2)_mQR^4$, $T(CH_2)_mC(OR^5)H(CH_2)_mQR^4$,

$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

when the dotted line is present, R^3 is absent;

otherwise R^3 has the meanings of R^2, wherein R^2 is as defined above, as well as OH, NR^4R^5, $COOR^4$, OR^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4,



$T(CH_2)_mQR^4$, $T(CH_2)_mC(OR^5)H(CH_2)_mQR^4$,

wherein T and Q are as defined above;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1$-C_6alkyl$)_{1 \text{ or } 2}$, $(CH_2)_nAr$, C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$,

$(CH_2)_mNR^4R^5$, $T\text{-}(CH_2)_mQR_4$, $CO\text{-}T\text{-}(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, $T\text{-}(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$;

R^6 is alkyl;

R^8 and R^9 independently are H, C_1-C_3 alkyl, NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, hydroxy, alkoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, CHO, CN, or NO_2;

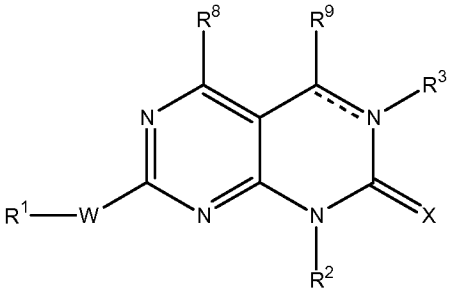
when the dotted line is absent, R^9 is additionally oxo,

S	NH	NR^4	NOH	NOR^4
C- R^4,	CH,	CH,	CH,	C, and

Y is a halo counter-ion.

35. (currently amended) [[A]] The method of Claim 3[[3]]4 wherein said non-receptor tyrosine kinase is selected from a transforming gene of the Rous sarcoma retrovirus (Src) family.

36. (currently amended) A method of inhibiting a serine kinase in a mammal comprising administering a serine kinase inhibiting among of a compound of ~~Claim 1~~ Formula VI



VI

or a pharmaceutically acceptable salt thereof,

wherein:

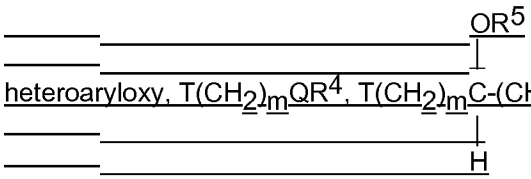
the dotted line represents an optional double bond;

W is NH, S, SO, or SO_2;

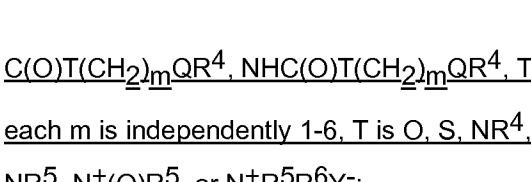
X is either O, S, or NR^{10};

R^1, R^2, and R^{10} are independently selected from the group consisting of H, $(CH_2)_nAr$, COR^4, $(CH_2)_n$heteroaryl, $(CH_2)_n$heterocyclyl, C_1-C_{10} alkyl, C_3-C_{10} cycloalkyl, C_2-C_{10} alkenyl, and

C_2-C_{10} alkynyl, wherein n is 0, 1, 2, or 3, and the $(CH_2)_n$Ar, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl, alkenyl, and alkynyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro,



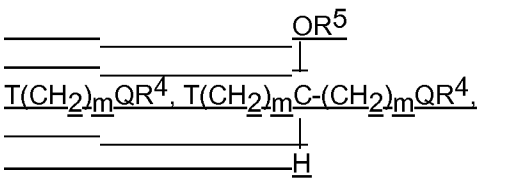
heteroaryloxy, $T(CH_2)_mQR^4$, $T(CH_2)_mC$-$(CH_2)_mQR^4$,



$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

when the dotted line is present, R^3 is absent;

otherwise R^3 has the meanings of R^2, wherein R^2 is as defined above, as well as OH, NR^4R^5, $COOR^4$, OR^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4,



wherein T and Q are as defined above;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1$-C_6alkyl$)_{1 \text{ or } 2}$, $(CH_2)_n$Ar, C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$, $(CH_2)_mNR^4R^5$, T-$(CH_2)_mQR_4$, CO-T-$(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, T-$(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$;

R^6 is alkyl;

R^8 and R^9 independently are H, C_1-C_3 alkyl, NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, hydroxy, alkoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, CHO, CN, or NO_2;

when the dotted line is absent, R^9 is additionally oxo,

S	NH	NR^4	NOH	NOR^4
‖	‖	‖	‖	‖
C- R^4,	CH,	CH,	CH,	C, and

Y is a halo counter-ion.

Claims 37-41 (canceled).

42. (original) A compound selected from:

7-[3-(Carboxy)-phenylamino]-3-(2,6-dichloro-phenyl)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

7-[3-(N-Dimethylaminopropyl-carboxamide)-phenylamino]-3-(2,6-dichloro-phenyl)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

7-[3-(N-Dimethylaminopropyl-carboxamide)-phenylamino]-3-(2,6-dichloro-3-hydroxy-phenyl)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

7-[3-(Carboxy)-phenylamino]-3-(2,6-dichloro-3-hydroxy-phenyl)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

3-(2,6-Dichloro-phenyl)-7-[4-(2-ethylamino-ethoxy)-phenylamino]-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

3-(2,6-Dichloro-3-hydroxy-phenyl)-7-[4-(2-ethylamino-ethoxy)-phenylamino]-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

7-[4-(Carboxamide)-phenylamino]-3-(2,6-dichloro-phenyl)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

7-[4-(Carboxamide)-phenylamino]-3-(2,6-dichloro-3-hydroxy-phenyl)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

3-(2,6-Dichloro-phenyl)-7-(3-hydroxymethyl-phenylamino)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

3-(2,6-Dichloro-phenyl)-7-(4-morpholin-4-yl-phenylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

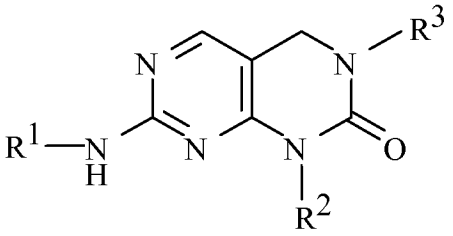
3-(2,6-Dichloro-3-hydroxy-phenyl)-1-methyl-7-(4-morpholin-4-yl-phenylamino)-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

3-(2,6-Dichloro-3-hydroxy-phenyl)-7-(3-hydroxymethyl-phenylamino)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;

7-[4-(3-Carboxypropyl)-phenylamino]-3-(2,6-dichloro-phenyl)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
7-[4-(3-Carboxypropyl)-phenylamino]-3-(2,6-dichloro-3-hydroxy-phenyl)-1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one;
3-(2,6-Dichloro-phenyl)-7-[4-(formyl-phenylamino]- 1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one; and
3-(2,6-Dichloro-3-hydroxy-phenyl)-7-[4-(formyl-phenylamino]- 1-methyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidin-2(1*H*)-one.

Claim 43 (canceled).

44. (original) A compound of the formula



wherein:

R^1 is C_1-C_{10} alkyl or $(CH_2)_nAr$;

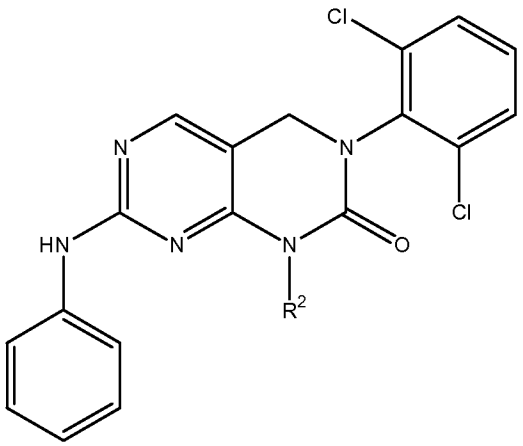
R^2 is H, C_1-C_{10} alkyl, or $(CH_2)_nAr$; and

R^3 is Ar,

wherein n is 0, 1, 2 or 3;

Ar is phenyl or phenyl substituted with one or two groups selected from halo, alkyl, or substituted alkyl; or a pharmaceutically acceptable salt thereof.

45. (original) A compound of the formula



wherein R^2 is $(CH_2)_nAr$, n is 0, 1, 2 or 3, and Ar is phenyl or phenyl substituted by a 2-aminoethyl group,
or a pharmaceutically acceptable salt thereof.

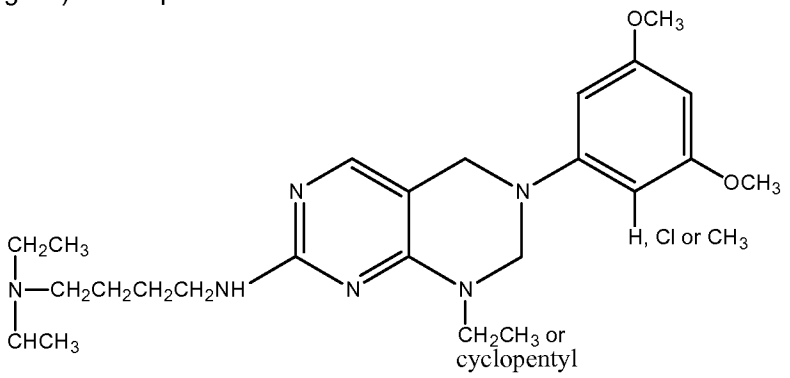
46. (currently amended) A pharmaceutical formulation comprising [[a]] the compound or pharmaceutically acceptable salt thereof of Claim 3 in combination with a pharmaceutically acceptable carrier, diluent or excipient.

Claim 47 (canceled).

48. (currently amended) A pharmaceutical formulation comprising [[a]] the compound or pharmaceutically acceptable salt thereof of Claim 44 in combination with a pharmaceutically acceptable carrier, diluent or excipient.

49. (currently amended) A pharmaceutical formulation comprising [[a]] the compound or pharmaceutically acceptable salt thereof of Claim 45 in combination with a pharmaceutically acceptable carrier, diluent or excipient.

50. (original) A compound of the formula



or a pharmaceutically acceptable salt thereof.

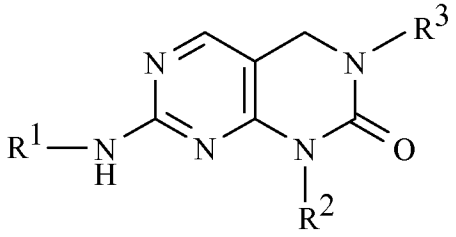
51. (original) The compound 7-(4-diethylamino-butylamino)-3-(2-chloro-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidine-2(1*H*)-one.

52. (original) The compound 7-(4-diethylamino-butylamino)-3-(2-methyl-3,5-dimethoxy-phenyl)-1-ethyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidine-2(1*H*)-one.

53. (original) The compound 7-(4-diethylamino-butylamino)-3-(3,5-dimethoxy-phenyl)-1-cyclopentyl-3,4-dihydro-pyrimido[4,5-*d*]pyrimidine-2(1*H*)-one.

Claims 54-55 (canceled).

56. (currently amended) A compound of ~~Claim 55 having the~~ formula VII



VII

or a pharmaceutically acceptable salt thereof,

wherein:

R^1 and R^2 independently are hydrogen, C_1-C_{10} alkyl, $(CH_2)_n$Ar, $(CH_2)_n$heteroaryl, C_3-C_{10} cycloalkyl, or $(CH_2)_n$ heterocyclyl, wherein n is 0, 1, 2 or 3, and the $(CH_2)_n$Ar, $(CH_2)_n$heteroaryl, alkyl, cycloalkyl and $(CH_2)_n$ heterocyclyl groups are optionally substituted by up to 5 groups selected from NR^4R^5, $N^+(O)R^4R^5$, $N^+R^4R^5R^6Y^-$, alkyl, phenyl, substituted phenyl, $(CH_2)_n$heteroaryl, hydroxy, alkoxy, phenoxy, thiol, thioalkyl, halo, COR^4, CO_2R^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4, aldehyde, nitrile, nitro, heteroaryloxy, $T(CH_2)_mQR^4$,

$$T(CH_2)_m\overset{\displaystyle OR^5}{\underset{\displaystyle H}{C}}\text{-}(CH_2)_mQR^4,$$

$C(O)T(CH_2)_mQR^4$, $NHC(O)T(CH_2)_mQR^4$, $T(CH_2)_mC(O)NR^4NR^5$, or $T(CH_2)_mCO_2R^4$ wherein each m is independently 1-6, T is O, S, NR^4, $N^+(O)R^4$, $N^+R^4R^6Y^-$, or CR^4R^5, and Q is O, S, NR^5, $N^+(O)R^5$, or $N^+R^5R^6Y^-$;

R^3 has the meanings of R^2, wherein R^2 is as defined above, as well as OH, NR^4R^5, $COOR^4$, OR^4, $CONR^4R^5$, $SO_2NR^4R^5$, SO_3R^4, PO_3R^4,

$$T(CH_2)_mQR^4,\ T(CH_2)_m\overset{\displaystyle OR^5}{\underset{\displaystyle H}{C}}\text{-}(CH_2)_mQR^4,$$

wherein T and Q are as defined above;

R^4 and R^5 are each independently selected from the group consisting of hydrogen, C_1-C_6 alkyl, substituted alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, $N(C_1$-C_6alkyl$)_{1 \text{ or } 2}$, $(CH_2)_nAr$, C_3-C_{10} cycloalkyl, heterocyclyl, and heteroaryl, or R^4 and R^5 together with the nitrogen to which they are attached optionally form a ring having 3 to 7 carbon atoms and said ring optionally contains 1, 2, or 3 heteroatoms selected from the group consisting of nitrogen, substituted nitrogen, oxygen, and sulfur;

when R^4 and R^5 together with the nitrogen to which they are attached form a ring, the said ring is optionally substituted by 1 to 3 groups selected from OH, OR^4, NR^4R^5, $(CH_2)_mOR^4$, $(CH_2)_mNR^4R^5$, $T\text{-}(CH_2)_mQR_4$, $CO\text{-}T\text{-}(CH_2)_mQR^4$, $NH(CO)T(CH_2)_mQR^4$, $T\text{-}(CH_2)_mCO_2R^4$, or $T(CH_2)_mCONR^4R^5$;

R^6 is alkyl; and

Y is a halo counter-ion.

Claims 57-58 (canceled).

59. (original) A pharmaceutical formulation comprising a compound of Claim 56 in combination with a pharmaceutically acceptable carrier, diluent or excipient.

60. (original) A compound of Claim 56 wherein R^1 is alkyl, pyridyl, or phenyl, each optionally substituted with hydroxy, alkoxy, NR^4R^5, or $T(CH_2)_mQR^4$.

Claims 61-66 (not entered).

Claim 67 (canceled).

Claims 68-74 (not entered).

Claim 75 (canceled).

Claims 76-80 (not entered).